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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,607	04/30/2001	Gerard Harbers	PHNL 000222	4771

7590 03/27/2003

Corporate Patent Counsel
U.S. Philips Corporation
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EXAMINER

BELL, PAUL A

ART UNIT	PAPER NUMBER
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2675

3

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/846,607

Applicant(s)

HARBERS ET AL.

Examiner

PAUL A BELL

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 8-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1,2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, and 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Sonehara (4,870,484).

With regard to claim 1, Sonehara teaches an assembly comprising a display device provided with a pattern of pixels associated with color filters, and an illumination system for illuminating the display device, said illumination system comprising a light-emitting panel and at least one light source, said light source being associated with the light-emitting panel, characterized in that the light source comprises at least three light-emitting diodes having different light-emission wavelengths, said light-emitting diodes being associated with the color filters (figures 2A, 3A, 5, 12, 13 column 1, lines 52-55, column 2, lines 1-3, column 4, lines 30-68, column 8, lines 20-48).

With regard to claim 2, Sonehara teaches an assembly as claimed in claim 1, characterized in that the light source comprises three light-emitting diodes having different light-emission wavelengths, and the color filter comprises three color filters, the spectral emission of

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each time one of the three light-emitting diodes being substantially adapted to the spectrum of one of the color filters (column 8, lines 20-48).

With regard to claim 3, Sonehara teaches an assembly as claimed in claim 1 or 2, characterized in that the light source comprises at least one blue light-emitting diode, at least one green light-emitting diode and at least one red light-emitting diode, the color filter comprises a blue, a green and a red color filter, and in operation, the blue color filter predominantly passes light originating from the blue light-emitting diode the green color filter predominantly passes light originating from the green light-emitting diode and the red color filter predominantly passes light originating from the red light-emitting diode (column 8, lines 20-48 and column 2, lines 1-3).

With regard to claim 4, Sonehara teaches an assembly as claimed in claim 1 or 2, characterized in that at least one of the light-emitting diodes is chosen such that the wavelength associated with the spectral maximum of the light-emitting diodes corresponds to the wavelength associated with the spectral maximum of the corresponding color filter in the visible spectrum (column 2, lines 1-3).

With regard to claim 5, Sonehara teaches an assembly as claimed in claim 4, characterized in that the wavelength $\lambda_{\text{led.sup.max}}$ associated with the spectral maximum of at least one of the light-emitting diodes and the wavelength $\lambda_{\text{cf.sup.max}}$ associated with the spectral maximum of the corresponding color filter meet the relation:

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$((\lambda_{\text{sub.led.sup.max}}) - (\lambda_{\text{sub.cf.sup.max}})) \leq 5 \text{ nm}$ (figure 13 and figure 3A approximate $\leq 5 \text{ nm}$).

With regard to claim 6, Sonehara teaches an assembly as claimed in claim 1 or 2, characterized in that the spectral bandwidth (FWHM) of the light-emitting diodes lies in the range between $10 \leq \text{FWHM} \leq 50 \text{ nm}$ (figure 13 approximate).

With regard to claim 7, Sonehara teaches an assembly as claimed in claim 6, characterized in that the spectral bandwidth lies in the range between $15 \leq \text{FWHM} \leq 30 \text{ nm}$ (figure 13 approximate).

With regard to claim 11, Sonehara teaches an assembly as claimed in claim 1 or 2, characterized in that each one of the light-emitting diodes has a luminous flux of at least 5 lm (inherent feature the device would not work properly unless 5 lm or greater).

With regard to claim 12, Sonehara teaches an assembly as claimed in claim 11, characterized in that the light-emitting diodes are mounted on a printed circuit board (inherent that a electrical component such as LED are mounted on a printed circuit board).

With regard to claim 13, Sonehara teaches a display device for use in an assembly as claimed in claim 1 or 2 (figure 1a, 1b, 2a, and 12).

With regard to claim 14, Sonehara teaches an illumination system for use in an assembly as claimed in claim 1 or 2 (figure 1a, 1b, 2a, and 12).

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Allowable Subject Matter


3. Claims 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Bell whose telephone number is (703) 306-3019. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to: Commissioner of Patents and Trademarks
Washington, D.C. 20231
or faxed to: (703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


Paul Bell
Art unit 2675
15 March 2003


STEVEN SARAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600